| and the second s | <b>er ID 122899</b><br>9, 2014 2:25:28 PM |   | *122                            | 2899*       |        |              |   |               |       |          | Page 1         |
|--|---|---|---------------------------------|-------------|--------|--------------|---|---------------|-------|----------|----------------|
| Item ID:<br>Revision ID:   | D3407-041                                 |   | Accept                          | *N900       | 040    | 110          | <b>N</b> *                                    | Setup S       | tart  | *NS      | <b>S1</b> *    |
| Item Name:   | Tow Ring                                  | 1   | ,                               |             |        |              |   | S             | top   | *NIC     | <b>30</b> *    |
| Start Date:  | 7/29/14 <b>Start Qty:</b> 10              | ×00.00  |                                 | Cust Item I | D:     |              |   |               |       | ı u.     | 1/             |
| Required Date:   | 7/29/14 <b>Req'd Qty:</b> 10              | 0.00 <b>*</b> / <b>1</b> / <b>3</b> *                 | 11                              | Customer:   |        |              |   |               |       |          |                |
| Reference:   |   | ///   | ٠)                              |             |        |              |   |               |       |          |                |
| Approvals:   | Process Plan: wm                          | Date: 7/20/14.  | Tooling:                        | Da          | ate:   |              |   |               | tart  | *NF      | <b>२</b> 1*    |
|  | QC:                                       | Date:   | <b>SPC</b> (Y/N):               | Da          | ate:   |              |   | S             | top   | *NF      | ₹2*            |
| Sequence ID/<br>Work Center II   | Operation Description                     |   | Set Up/<br>Run Hours            | Tool ID     | Tool # | Plan<br>Code | Accept<br>Qty                                 | Reject<br>Qty |       |          | Insp.<br>Stamp |
| Draw Nbr   | Revision Nbr                              |   | ****                            |             |        |              |   |               |       |          |                |
| D3407  | Rev E                                     |   |                                 |             |        |              |   |               |       |          | 14-08-         |
| 100  |   |   | 0.00                            |             |        |              | **  |               |       |          | 19, 00         |
| *1 <u>0</u> 0*   | Large Fab                                 |   |                                 |             |        |              | lф  |               |       |          |                |
| Large Fab  | Memo                                      |   | 0.00                            |             |        |              | <u>, , , , , , , , , , , , , , , , , , , </u> |               |       |          |                |
| Large Fab  | Weld I<br>A/R                             | O3407-1/-5 using welding rod TIC<br>TIG174 ROD Batch: | 3174 as per Dwg D3407<br>325 76 | ' & QSI 004 |        |              |   |               |       |          |                |
| 110  | OC9- Inspect visual                       | per QSI004- Fusion Welds                              | 0.00                            |             |        |              |   |               | 4.    |          | DAS<br>24      |
| *110*  | QOS MOPOOL VISUAI                         | per Quivot- rusion weius                              | 0.00                            |             |        |              | * *   | JU            | IL 3  | 1 2014   | 24             |
| QC   | Memo                                      |   | 0.00                            |             |        | ;            |   |               |       |          |                |
| Quality Control  |   |   |                                 |             |        |              |   |               |       |          |                |
| 120  | QC5- Inspect part of                      | ompleteness to step on W/O                            | 0.00                            |             |        |              |   |               |       |          | DAS            |
| *120*  | •   | -   |                                 |             |        |              | //  | 11            | 111 3 | 3 1 2014 | 4 24<br>9-89   |
| QC   | Memo                                      |   | 0.00                            |             |        |              |   | -             |       |          |                |

Quality Control

| DQA:                     | Date:                  |           |               |                              |             |                              |                 |             |                            | DART     |                       |               |                    |
|--------------------------|------------------------|-----------|---------------|------------------------------|-------------|------------------------------|-----------------|-------------|----------------------------|----------|-----------------------|---------------|--------------------|
| QA Closed:               |                        |           | Date:         |                              |             | WORK ORDER NON               | -CC             | ONFO        | RMANCE / UPDATE            | Wo       | rk Order up           | date only     | AEROSPACE          |
| Work Orde                | ar:                    |           |               |                              |             | DISPOSITION                  |                 |             | AGAINST                    |          |                       |               |                    |
| WOIK OIU                 | -                      |           |               |                              |             | Rework                       | 1               |             | Skid-tube Crosstube        | • •      | Water Jet Engineering |               |                    |
| Part N                   | ۱o                     | ·         | <u> </u>      |                              |             | Scrap<br>Use-as-is           |                 |             | Machining Small Fab        | ·П       | Pro                   | d. Eng. Coor. | Quality Other      |
| NCR N                    | No                     |           | <del></del>   |                              |             | Suspected Unapproved         |                 |             | Large Fab Composite        | $\vdash$ |                       | Supplier      |                    |
| Root                     | Root De                |           | Desci         | ription of work order update | ı           | nitial                       | Action          |             | Sign &                     |          |                       |               |                    |
| Cause                    |                        | Date      | Step          | Qty                          |             | or non-conformance           | Ch              | ief Eng     | Description                |          | \Date                 | Verification  | QC Inspector       |
| Design                   | Ш                      |           |               |                              |             |                              |                 |             |                            |          |                       | M 3 1 3       | of the             |
| Doc/Data                 |                        |           |               |                              |             | •                            |                 |             |                            |          |                       |               | 7.3.               |
| Equip/Tooling            |                        |           |               |                              |             |                              | ļ               |             | ·                          |          |                       |               |                    |
| Handling/Pre             |                        |           | Ì             |                              |             |                              |                 |             |                            |          |                       |               |                    |
| Material                 | Ш                      |           |               |                              |             |                              |                 |             |                            |          |                       |               |                    |
| Operator                 | Ш                      |           |               |                              |             |                              |                 |             |                            |          |                       |               |                    |
| Offset/Setup             |                        |           |               |                              |             |                              |                 |             |                            | 1        |                       | -             |                    |
| Process                  | Ш                      |           |               |                              |             |                              |                 |             |                            | 1        |                       |               |                    |
| Supplier                 |                        |           |               |                              |             | · ·                          |                 |             |                            |          |                       |               |                    |
| Training                 |                        |           |               |                              |             |                              | 1               |             |                            |          |                       |               |                    |
| Transport                | Ш                      |           |               |                              | ,           |                              |                 |             |                            | - 1      |                       |               |                    |
| Unapproved               |                        |           | <u> </u>      |                              |             |                              |                 |             |                            |          |                       |               |                    |
| ×                        |                        |           |               |                              |             |                              | FAI             | ULT CA      | TEGORY                     |          |                       |               |                    |
| Landi                    | ng G                   | ìear      |               |                              |             | General                      | _               | ,           |                            |          |                       |               | ٦                  |
|                          | Ш                      | Bending   |               |                              |             | Bend                         | <u></u>         | Folio/F     | Program                    |          | Outside Dim           | <del></del>   | Pressure/Forced    |
|                          |                        | Centre No | ot Concei     | ntric                        |             | BOM/Route                    |                 | Grain       |                            | Ш        | Over/Under            | tolerance     | Set-up             |
|                          |                        | Cracks    |               |                              |             | Broken/Damage/Defect         |                 | Hardwa      | are                        |          | Part Incorred         | i             | Temperature/Cure   |
|                          | Crimp/Kink/Ripple/Wave |           |               | /Wave                        |             | Burrs                        |                 | Inspect     | ion Incomplete/Unqualified | Ш        | Part Lost/Mi          | ssing         | Weld               |
|                          | Cuffs                  |           |               |                              |             | Contamination                |                 | Instruc     | tions Incomplete/Unclear   |          | Part Moved            |               | Wrong Stock Pulled |
| Crushing                 |                        |           |               | Countersink                  |             | 4                            | gned/off center |             | Positioned V               |          | 7                     |               |                    |
| Heat Treat               |                        |           | Cut Too Short |                              | Mislab      | eled                         |                 | Power Loss/ | Surge                      | Other    |                       |               |                    |
| Inspection Strip in Tube |                        |           | Drawing       |                              | Misrea      | d                            | _               |             |                            |          |                       |               |                    |
|                          | Marks/Chatter [        |           |               |                              | Drill Holes |                              | Off-set         |             |                            |          |                       |               |                    |
| Turning Sequence         |                        |           |               |                              | Finish      |                              | Out of          | Calibration |                            | · ·      |                       |               |                    |
|                          |                        |           |               |                              |             | Fit/Function Out of Sequence |                 |             |                            |          |                       |               |                    |

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| Work Ord Tuesday, July 2  |   |                                      |  | *122                         | 2899*                    |       |              |               |          |               |                  | Page 2         |
|---|---|--------------------------------------|--|------------------------------|--------------------------|-------|--------------|---------------|----------|---------------|------------------|----------------|
| Item ID:<br>Revision ID:<br>Item Name:  | D3407-041 Tow Ring                                  |                                      |  | Accept                       | *N900                    | 040   | 100          | <b>)</b> *    | Setup    | Start<br>Stop | 17               | S1*            |
| Start Date:<br>Required Date:<br>Reference:   | 7/29/14   | Start Qty: 10.00<br>Req'd Qty: 10.00 | *10*<br>*10*                                 |                              | Cust Item I<br>Customer: | D:    |              |               |          | ·             | ^I\I             | S2*            |
| Approvals:  | Process Pla   | n:                                   | Date:  |                              | Da                       | ate:  |              |               | Run      | Start         | *N               | R1*            |
|   | QC:   |                                      | Date:  | SPC (Y/N):                   | Da                       | ate:  |              |               |          | Stop          | *N               | R2*            |
| Sequence ID/ Work Center II  130  *120* Powdercoat  Powder Coating  | White Gloss(Ref:4.3.5.2  Memo  **Mask Thi START TIM |                                      | aded Section**  3: 7-40 Hoo?  DERATURE: Hoo? | Set Up/<br>Run Hours<br>0.00 | Tool ID                  | Tool# | Plan<br>Code | Accept<br>Qty | Qty      | y l           | Reject<br>Number | Insp.<br>Stamp |
| 140 <b>*1 \( \)</b> \( \) \ |   | QC3- Inspect Part Finish  Memo       |  | 0.00                         |                          |       |              | 11:           | <u>S</u> | (             | D                | 14/08/2c       |

150

\*150\* Packaging

Memo

Identify as per dwg & Stock Location: 575 30 0.00

0.00

DAS 28 AUG 2 0 2014

Packaging

| DQA:                      |                        | Date: WORK ORDER NON-CONFORMANCE / UPDATE |                           |             |                              |                                |                    |   |  |                        |                           | *DART  |                     |
|---------------------------|------------------------|---|---------------------------|-------------|------------------------------|--------------------------------|--------------------|---|--|------------------------|---------------------------|--|---------------------|
| QA Closed:                |                        |   | Date:                     |             |                              | WORK ORDER NON-                | -CC                | JNFO                                    | RIMANCE / UI                                     |                        | Work Order u <sub>l</sub> | odate only                                       | AEROSPACE           |
|                           | _                      |   |                           | •           |                              | DISPOSITION                    |                    |   | <del>*************************************</del> | /PROCESS               |                           |  |                     |
| Work Orde                 | er: —                  |   |                           |             | <del></del>                  | D                              | Danie et 🖂         |   |  | ۳                      | _                         | Matar lat  | 7                   |
| Part N                    | 10                     |   |                           |             |                              | Rework<br>Scrap                |                    | Skid-tube Crosstube Machining Small Fab |  |                        | <del>_</del>              | Water Jet d. Eng. Coor.                          | Engineering Quality |
| NCR N                     | No                     |   |                           |             |                              | Use-as-is Suspected Unapproved |                    | Therr                                   | noforming Large Fab                              | Finishing<br>Composite | Rec/Sto                   | Other  |                     |
| Root                      | Root De                |   |                           | Desci       | ription of work order update |                                | Initial            | Act                                     | ion  | Sign &                 |                           |  |                     |
| Cause                     |                        | Date                                      | ate Step Qty or non-confo |             | or non-conformance           | Ch                             | nief Eng           | Descr                                   | iption   | Date                   | Verification              | QC Inspector                                     |                     |
| Design                    |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Doc/Data                  |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Equip/Tooling             |                        |   |                           |             |                              |                                |                    |   |  |                        | - }                       |  |                     |
| Handling/Pre              |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  | ·                   |
| Material                  |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Operator                  |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Offset/Setup              | Ш                      |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Process                   |                        |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Supplier                  | Ш                      |   |                           |             |                              |                                |                    |   |  |                        |                           |  |                     |
| Training                  |                        |   |                           |             |                              |                                | ĺ                  |   |  |                        | İ                         |  |                     |
| Transport                 |                        |   |                           |             |                              |                                | ]                  |   |  |                        |                           |  |                     |
| Unapproved                |                        |   |                           |             |                              |                                |                    |   | ļ  |                        |                           |  | <u> </u>            |
|                           |                        |   |                           |             |                              |                                | FA                 | ULT CA                                  | TEGORY   |                        |                           |  |                     |
| Landi                     | ng Ge                  | ear                                       |                           |             | _                            | General                        |                    | -                                       |  | -                      | <del></del> 1             | _  | 7                   |
|                           | ∐_В                    | ending                                    |                           |             |                              | Bend                           |                    | - 1                                     | Program  | ļ.                     | Outside Dim               |  | Pressure/Forced     |
|                           | Щ°                     | entre No                                  | ot Concer                 | ntric       |                              | BOM/Route                      |                    | Grain                                   |  |                        | Over/Under                | <del>                                     </del> | Set-up              |
|                           | Щc                     | racks                                     |                           |             | <u> </u>                     | Broken/Damage/Defect           |                    | Hardwa                                  | are  | ļ.                     | Part Incorre              | <del> </del>                                     | Temperature/Cure    |
|                           | Crimp/Kink/Ripple/Wave |   |                           | e/Wave      |                              | Burrs                          |                    | Inspect                                 | ion Incomplete/Ur                                | nqualified             | Part Lost/M               |  | Weld                |
|                           | Cuffs                  |   |                           |             | Contamination                |                                | 4                  | tions Incomplete/l                      | Jnclear  | Part Moved             | L                         | Wrong Stock Pulled                               |                     |
| Crushing                  |                        |   |                           | Countersink | _                            | -                              | gned/off center    | 1                                       | Positioned \                                     |                        | 7                         |  |                     |
| Heat Treat                |                        |   | Cut Too Short             |             | Mislab                       |                                | L                  | Power Loss,                             | /Surge   | Other                  |                           |  |                     |
|                           | ال                     | nspectio                                  | n Strip in                | Tube        |                              | Drawing                        | <u></u>            | Misrea                                  | d  |                        |                           |  |                     |
| Marks/Chatter Drill Holes |                        |   |                           |             | Drill Holes                  |                                | Off-set            |   |  |                        |                           |  |                     |
| Turning Sequence          |                        |   |                           |             |                              | Finish                         | Out of Calibration |   |  |                        |                           |  |                     |
|                           | Wave/Twist in Tube     |   |                           |             |                              | Fit/Function Out of Sequence   |                    |   |  |                        |                           |  |                     |

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| Work Ord Tuesday, July 29                   |                    |                                      |            | *122899*             |                       |             |       |           |              |  |  |  |
|---|--------------------|--------------------------------------|------------|----------------------|-----------------------|-------------|-------|-----------|--------------|--|--|--|
| Item ID:<br>Revision ID:<br>Item Name:      | D3407-041 Tow Ring |                                      |            | Accept               | *N900                 | 0040100     | )*    | Setup Sta | 1421         |  |  |  |
| Start Date:<br>Required Date:<br>Reference: | 7/29/14<br>7/29/14 | Start Qty: 10.00<br>Req'd Qty: 10.00 | *10<br>*10 |                      | Cust Item 1 Customer: |             |       |           | "IV.>/"      |  |  |  |
| Approvals:                                  | Process Pla        | nn:                                  | Date:      | Tooling: SPC (Y/N):  | Date: Date:           |             |       | Run Star  | ^NH1^        |  |  |  |
| Sequence ID/<br>Work Center II              | )                  | Operation<br>Description             |            | Set Up/<br>Run Hours | Tool ID               | Tool # Plan | Accep | t Reject  | Reject Insp. |  |  |  |

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

160

\*160\*

Quality Control

MW-7.20

| DQA:          |                      |                              |          |                                |        |                      |        |                        |                              | "DART                  |             |             |                            |             |                        |
|---------------|----------------------|------------------------------|----------|--------------------------------|--------|----------------------|--------|------------------------|------------------------------|------------------------|-------------|-------------|----------------------------|-------------|------------------------|
| QA Closed:    |                      |                              | Date:    |                                |        | WORK ORDER NON       | -CC    | NFO                    | RMANCE / UF                  |                        | Vork Or     | der up      | odate only                 |             | AEROSPACE              |
|               |                      |                              |          |                                |        | DISPOSITION          |        |                        |                              |                        |             |             |                            |             |                        |
| Work Orde     | er:                  |                              |          |                                |        | , ,                  | ıÌ     |                        |                              |                        |             | 7 Water let |                            |             | [nainaaring            |
| Part N        | lo                   |                              |          |                                |        | Rework<br>Scrap      |        |                        | Skid-tube Machining          | Crosstube<br>Small Fab |             | Pro         | Water Jet<br>d. Eng. Coor. |             | Engineering<br>Quality |
| NCR No.       |                      |                              |          | Use-as-is Suspected Unapproved | — I    |                      |        | Finishing<br>Composite | Rec/Store/Packaging Supplier |                        |             |             | Other                      |             |                        |
| Root          | ot De                |                              | Desci    | ription of work order update   | ı      | nitial               | Acti   | ion                    | Sig                          | n &                    |             |             |                            |             |                        |
| Cause         | İ                    | Date Step Qty or non-conform |          | or non-conformance             | Ch     | ief Eng              | Descr  | iption                 | Da                           | ate                    | Verificatio | n           | QC Inspector               |             |                        |
| Design        |                      |                              |          |                                |        |                      |        |                        |                              |                        |             |             |                            |             |                        |
| Doc/Data      |                      |                              |          |                                |        | •                    |        |                        |                              |                        |             |             |                            |             | 1                      |
| Equip/Tooling |                      |                              |          |                                |        |                      |        |                        |                              |                        | Ì           |             |                            |             |                        |
| Handling/Pre  |                      |                              |          |                                |        |                      |        |                        |                              |                        |             |             |                            |             |                        |
| Material      |                      |                              |          |                                |        |                      |        |                        |                              |                        |             |             |                            |             | 1                      |
| Operator      |                      |                              |          |                                |        |                      |        |                        |                              |                        | į           |             |                            |             |                        |
| Offset/Setup  |                      |                              |          |                                |        |                      |        |                        |                              |                        |             |             |                            |             |                        |
| Process       |                      |                              |          |                                |        |                      | İ      |                        |                              |                        |             |             |                            |             |                        |
| Supplier      |                      |                              |          |                                |        |                      |        |                        | 1                            |                        |             |             |                            |             |                        |
| Training      |                      |                              |          |                                |        |                      |        |                        |                              |                        | Ì           |             |                            | }           |                        |
| Transport     |                      | Ì                            |          |                                |        |                      |        |                        |                              |                        |             |             |                            | İ           |                        |
| Unapproved    |                      |                              | •        |                                |        |                      |        |                        |                              |                        |             |             |                            |             |                        |
|               |                      |                              |          |                                |        |                      | FAI    | ULT CA                 | TEGORY                       |                        |             |             |                            |             |                        |
| Landi         | ng Gea               | ır                           |          |                                |        | General              | ,      |                        |                              | -                      |             |             |                            | _           |                        |
|               | Be                   | ending                       |          |                                |        | Bend                 |        | Folio/F                | Program                      | Ļ                      | Outsi       | de Dim      | ensions                    | F           | Pressure/Forced        |
|               | Ce                   | ntre No                      | t Conce  | ntric                          |        | BOM/Route            |        | Grain                  |                              |                        | Over/       | 'Under      | tolerance                  | lacksquare  | Set-up                 |
|               | Cr                   | acks                         |          |                                | L      | Broken/Damage/Defect | L      | Hardwa                 | are                          |                        | Part I      | ncorre      | cí                         |             | Temperature/Cure       |
| i             | Cr                   | imp/Kin                      | k/Ripple | /Wave                          |        | Burrs                |        | Inspect                | ion Incomplete/Un            | nqualified             | Part L      | .ost/Mi     | issing                     | $\bigsqcup$ | Weld                   |
|               | Cuffs                |                              |          |                                |        | Contamination        | L      | Instruc                | tions Incomplete/L           | Jnclear                | Part N      | Noved       |                            | ╚           | Wrong Stock Pulled     |
|               | Cr                   | ushing                       |          |                                |        | Countersink          |        | Misali                 | gned/off center              | Ĺ                      |             | oned V      | _                          | _           |                        |
|               | Пн                   | eat Trea                     | t        |                                |        | Cut Too Short        |        | Mislab                 | eled                         |                        | Powe        | r Loss/     | Surge                      | Ш           | Other                  |
|               | In                   | spection                     | Strip in | Tube                           |        | Drawing              |        | Misrea                 | d                            |                        |             |             |                            |             |                        |
|               | Пм                   | arks/Ch                      | atter    |                                |        | Drill Holes          |        | Off-set                |                              |                        |             |             |                            |             |                        |
|               |                      |                              |          |                                | Finish |                      | Out of | Calibration            |                              |                        |             |             |                            |             |                        |
|               | - Wave/Twist in Tube |                              |          |                                |        | Fit/Function         |        | Out of                 | Sequence                     |                        |             |             |                            |             |                        |

<sup>\*</sup>H:/FORM\$\(\)Quality Assurance\approved QA/NCRWO RevH

Page 1

Work Order ID: 122899

\*122899\*

Parent Item:

D3407-041

\*D3407-041\*

117084

120420

Parent Item Name: Tow Ring

**Start Date: 7/29/14** 

Required Date: 7/29/14

**Start Qty: 10.00** 

Required Qty: 10.00

**Comments:** 

IPP Rev:A05.10.14New issueKJ/EC

IPP Rev:B 08-09-09 revE as per dwg DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per K | t Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-----------|----------------|---------------|----------------|--------|
| D3407-1                         |                        | Manufactured  | No          |                     | 400              | 100             | Each               | 37.0000        | 1         | 10             |               |                |        |
| *D3407-1*                       | •                      |               |             |                     |                  |                 |                    |                | **        |                |               |                | 14-08- |
|                                 |                        |               |             | Location<br>WA001   | 121455)          | Loc             | 37                 | Loc Code       | <u> </u>  |                | _             |                | /      |
| 03407-5                         |                        | Manufactured  | No          |                     | 116814           | 100             | 37<br>Each         | 81.0000        | 1         | 10             |               |                |        |
| *D3407-5*                       | ·                      |               |             |                     |                  |                 |                    |                | **        |                |               |                | 14-00  |
|                                 |                        |               |             | Location            |                  | Loc             |                    | Loc Code       |           |                |               |                | ĺ      |
|                                 |                        |               |             | WA001               | 113761           |                 | 81<br>20           |                | -         | er             | -             |                | 0      |
|                                 |                        |               |             |                     | 115097           |                 | 3                  |                |           | 33             | 7             |                |        |
|                                 |                        |               |             | ţ                   | 115804           |                 | 8                  |                |           | 8              |               |                |        |

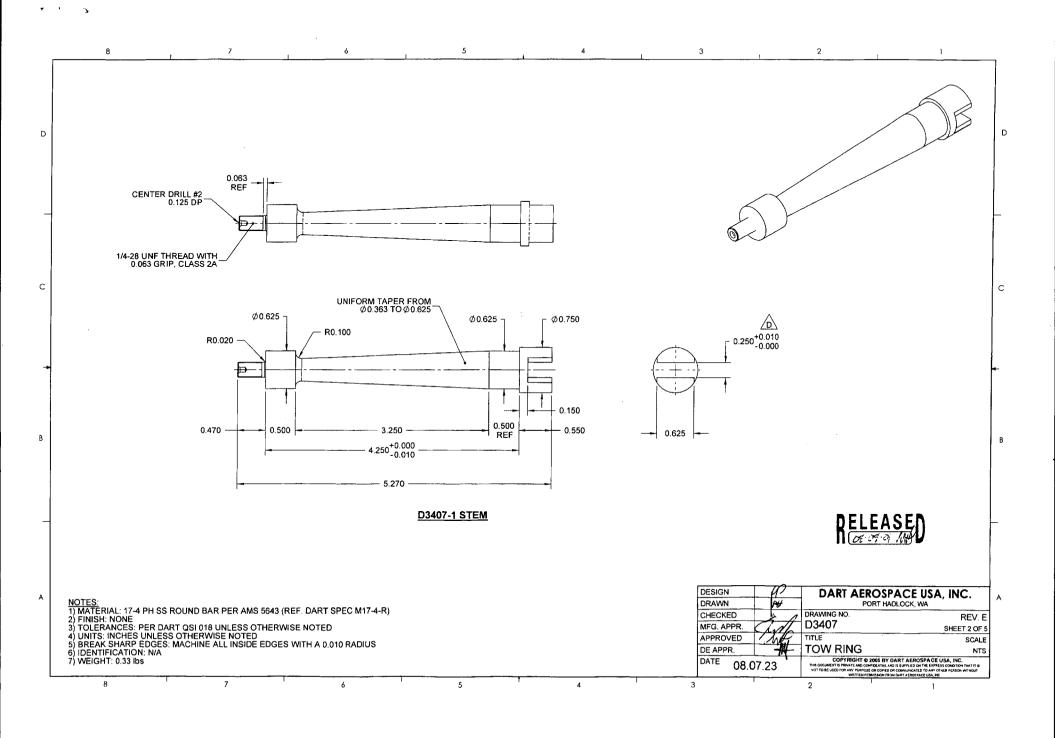
30

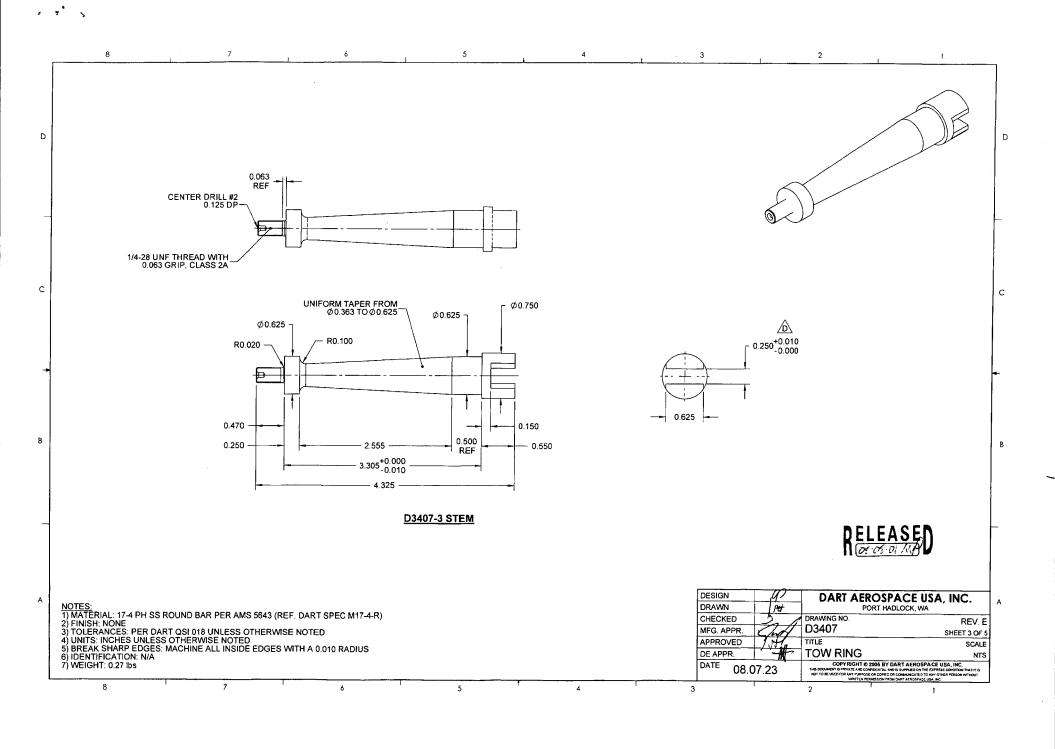
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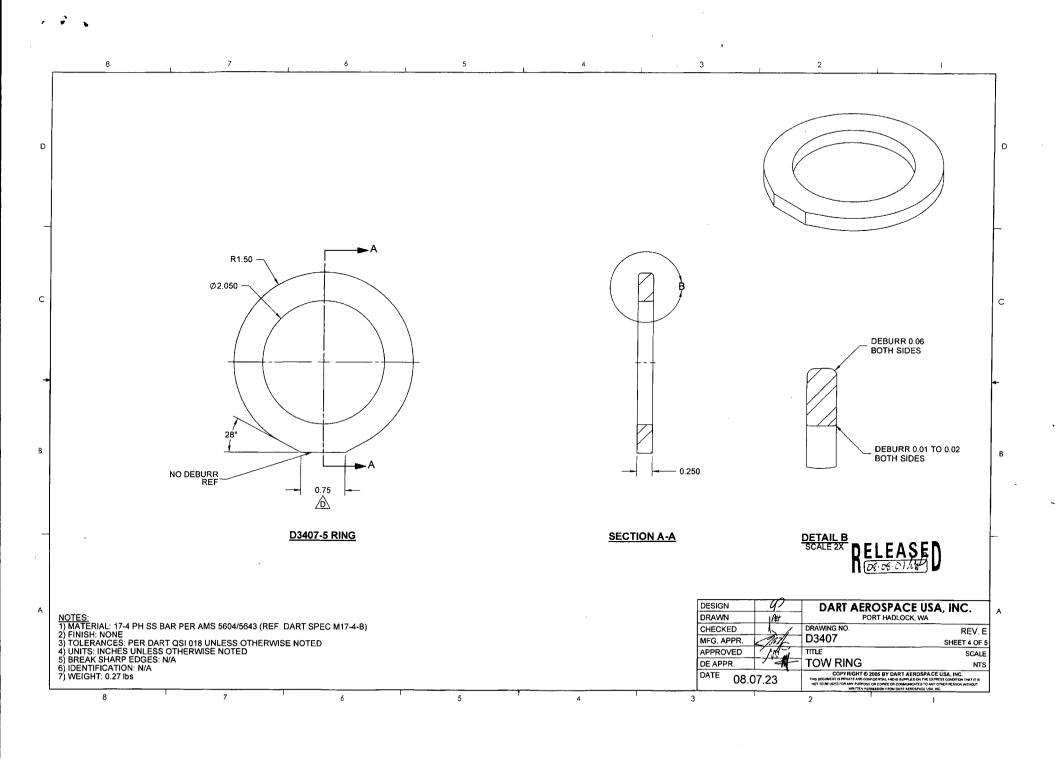
| DQA: Date:                |                          |                        |                      |               |                              |                      |            | _               |                    |   |              | TAART         |                    |
|---------------------------|--------------------------|------------------------|----------------------|---------------|------------------------------|----------------------|------------|-----------------|--------------------|---|--------------|---------------|--------------------|
| QA Closed:                |                          |                        | Date:                |               |                              | WORK ORDER NON-      | -C(        | ONFO            | RMANCE / U         |   | Vork Order u | odate only    | AEROSPACE          |
| QA Closeu:                |                          | -                      | Date.                |               | <u>-</u>                     |                      |            |                 |                    |   | EPARTMENT    |               |                    |
| Work Orde                 | er:                      |                        |                      |               |                              | DISPOSITION          |            |                 |                    |   |              |               |                    |
|                           | -                        |                        |                      |               | _                            | Rework               |            |                 | Skid-tube          | Crosstube                                     |              | Water Jet     | Engineering        |
| Part N                    | lo.                      |                        |                      |               |                              | Scrap                |            |                 | Machining          | Small Fab                                     | Pro          | d. Eng. Coor. | Quality            |
|                           | -                        |                        |                      |               | _                            | Use-as-is            |            | Therr           | noforming          | Finishing                                     | Rec/Sto      | re/Packaging  | Other              |
| NCR No.                   |                          |                        | Suspected Unapproved |               |                              | Large Fab            | Composite  |                 | Supplier           | ] [   |              |               |                    |
|                           |                          |                        |                      |               |                              |                      |            | 1               | •                  | C: 0  | T            |               |                    |
| Root                      |                          | 1 1 1                  |                      | Desci         | ription of work order update |                      | Initial    |                 | ion                | Sign &  | Verification | QC Inspector  |                    |
| Cause                     | -                        | Date                   | Step                 | Qty           |                              | or non-conformance   | L'n        | nief Eng        | Descr              | ription                                       | Date         | verincation   | QC IIISPECTOI      |
| Design                    |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Doc/Data<br>Equip/Tooling | $\dashv$                 |                        |                      |               |                              |                      | 3          |                 |                    |   |              | 1             |                    |
| Handling/Pre              |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Material                  | 一                        |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Operator                  |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Offset/Setup              |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Process                   |                          |                        |                      |               |                              |                      |            |                 |                    |   | 1            |               |                    |
| Supplier                  |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
| Training                  |                          |                        |                      |               |                              | ;                    |            |                 |                    |   |              |               |                    |
| Transport                 |                          |                        | Ì                    |               |                              |                      |            |                 |                    |   |              | 1             |                    |
| Unapproved                |                          |                        |                      |               |                              |                      |            |                 |                    |   |              |               |                    |
|                           |                          |                        |                      |               |                              |                      | FA         | ULT CA          | TEGORY             | · · · · · · · · · · · · · · · · · · ·         |              |               |                    |
| Landir                    | ng G                     | iear                   |                      |               | _                            | General              | _          | -               |                    | <b>-</b>                                      | _            | _             | ¬                  |
|                           |                          | Bending                |                      |               |                              | Bend                 |            | 4 '             | Program            | _   | Outside Dim  | <b>⊢</b>      | Pressure/Forced    |
|                           |                          | Centre No              | ot Concer            | ntric         | _                            | BOM/Route            | <u>_</u>   | Grain           |                    | <u> </u>                                      | Over/Under   |               | Set-up             |
|                           | -                        | Cracks                 |                      |               | L                            | Broken/Damage/Defect |            | Hardwa          |                    | <u>,                                     </u> | Part Incorre | _             | Temperature/Cure   |
|                           |                          | Crimp/Kink/Ripple/Wave |                      |               | L                            | Burrs                | lacksquare | -1 '            | ion Incomplete/Ur  | ·   | Part Lost/M  | -             | Weld               |
|                           |                          | Cuffs                  |                      |               | _                            | Contamination        |            | i               | tions Incomplete/l | Jnclear                                       | Part Moved   |               | Wrong Stock Pulled |
|                           | Crushing                 |                        |                      |               | Countersink                  | _                    | -1         | gned/off center | L                  | Positioned \                                  | -            | <b>-</b> .    |                    |
| Heat Treat                |                          |                        | <u> </u>             | Cut Too Short | <u> </u>                     | Mislab               |            | L               | Power Loss/        | 'Surge  | Other        |               |                    |
|                           | Inspection Strip in Tube |                        |                      | Drawing       | _                            | Misrea               |            |                 |                    |   |              |               |                    |
|                           | $\vdash$                 | Marks/Ch               |                      |               |                              | Drill Holes          |            | Off-set         |                    |   |              |               |                    |
| [                         | Turning Sequence         |                        |                      |               |                              | Finish               |            | -{              | Calibration        |   |              |               |                    |
|                           | LJ                       | Wave/Tw                | vist_in Tub          | )e            |                              | Fit/Function         | 1          | Out of          | Sequence           |   |              |               |                    |

2 8 3 SHOP COPY QTY -041 QTY -045 QTY PART NUMBER DESCRIPTION RETURN TO TOW RING X D3407-041 ENGINEERING D3407-043 TOW RING **UNCONTROLLED COPY** D3407-045 TOW RING D SUBJECT TO AMENDMENT STEM D3407-1 STEM D3407-3 WITHOUT NOTICE D3407-5 RING WORK ORDER D3407-7 STEM -D3407-5 RING -D3407-5 RING -D3407-5 RING 8 1/8 E -D3407-1 STEM 6 6 D3407-3 STEM D3407-7 STEM **D3407-041 TOW RING** D3407-043 TOW RING D3407-045 TOW RING ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY 08.07.23 D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY 08.04.07 -1/-3 LONGER FOR FIT W/WASHER 05.09.09 UPDATE DIAMETER, THREAD CLASS ADDED CP 05.06.17 05.03.16 REV. DESCRIPTION BY DATE DESIGN DART AEROSPACE USA, INC. NOTES:
1) MATERIAL: N/A
2) FINISH: POWDER COAT WHITE (4,3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED DRAWN PORT HADLOCK, WA DRAWING NO. CHECKED REV. E D3407 MFG. APPR. SHEET 1 OF 5 APPROVED 3) BREAK SHAKE ELUGES, IVA
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER 1) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING TOW RING DE APPR. COPPRIGHT © 2005 BY DART AEROSPACE USA, INC.

THE DOCUMENT SHOULD AND IS SEVEL OF THE EXPRESS COMMON THAT IS NOT THE FORMAT OF T DATE 08.07.23 5







8 D 0.063 REF CENTER DRILL #2 0.125 DP ·· 1/4-28 UNF THREAD WITH 0.063 GRIP, CLASS 2A С С Ø0.625 Ø0.625 R0.100 - 0.250<sup>+0.010</sup> R0.020 Ø0.750 0.500<sup>+0.000</sup> -0.010 0.150 0.500 REF 0.350 3.500 0.550 0.625 4.500<sup>+0.000</sup> -0.010 5.400 <u>D3407-7 STEM</u> DART AEROSPACE USA, INC.
PORT HADLOCK, WA DESIGN AJS NOTES:
1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
6) IDENTIFICATION: N/A
7) WEIGHT: 0.34 lbs DRAWN DRAWING NO. CHECKED REV. E D3407 MFG. APPR. SHEET 5 OF 5 APPROVED TITLE SCALE **TOW RING** DE APPR. NTS COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.

INS DODARDE OF PRINT AND COMPOSITION, AND IS AWARD ON THE COPPLEE COMMON THAT IT IS

NOT TO BE USED FOR ANY PRAINING ON COMPUSE COMMON TO TO ANY OTHER PERSON WINDOW

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